

## PATENT COOPERATION TREATY

PCT

NOTIFICATION OF ELECTION  
(PCT Rule 61.2)

From the INTERNATIONAL BUREAU

To:

Commissioner  
 US Department of Commerce  
 United States Patent and Trademark  
 Office, PCT  
 2011 South Clark Place Room  
 CP2/5C24  
 Arlington, VA 22202  
 ETATS-UNIS D'AMERIQUE

in its capacity as elected Office

Date of mailing (day/month/year) 13 November 2000 (13.11.00)	
International application No. PCT/FI00/00118	Applicant's or agent's file reference 49437
International filing date (day/month/year) 16 February 2000 (16.02.00)	Priority date (day/month/year) 16 February 1999 (16.02.99)
<b>Applicant</b> NAGHIAN, Siamäk	

1. The designated Office is hereby notified of its election made:

in the demand filed with the International Preliminary Examining Authority on:

14 September 2000 (14.09.00)

in a notice effecting later election filed with the International Bureau on:

2. The election  was

was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland  Facsimile No.: (41-22) 740.14.35	Authorized officer  F. Baechler  Telephone No.: (41-22) 338.83.38
---	---

## PATENT COOPERATION TREATY

09/913457

## PCT

## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference <b>49437</b>	<b>FOR FURTHER ACTION</b>	see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.
International application No. <b>PCT/FI 00/00118</b>	International filing date ( <i>day/month/year</i> ) <b>16 February 2000</b>	(Earliest) Priority Date ( <i>day/month/year</i> ) <b>16 February 1999</b>
Applicant <b>NOKIA NETWORKS OY et al</b>		

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of **2** sheets.

It is also accompanied by a copy of each prior art document cited in this report.

1.  Certain claims were found unsearchable (See Box I).
2.  Unity of invention is lacking (See Box II).
3.  The international application contains disclosure of a nucleotide and/or amino acid sequence listing and the international search was carried out on the basis of the sequence listing
  - filed with the international application.
  - furnished by the applicant separately from the international application,
    - but not accompanied by a statement to the effect that it did not include matter going beyond the disclosure in the international application as filed.
    - transcribed by this Authority.
4. With regard to the title,  the text is approved as submitted by the applicant.
  - the text has been established by this Authority to read as follows:
5. With regard to the abstract,
  - the text is approved as submitted by the applicant.
  - the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.
6. The figure of the drawings to be published with the abstract is:  
Figure No. **2**
  - as suggested by the applicant.
  - because the applicant failed to suggest a figure.
  - because this figure better characterizes the invention.

## INTERNATIONAL SEARCH REPORT

1

International application No.

PCT/FI 00/00118

## A. CLASSIFICATION OF SUBJECT MATTER

IPC7: H04Q 7/38

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC7: H04Q

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

SE,DK,FI,NO classes as above

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 0750440 A2 (NTT MOBILE COMMUNICATIONS NETWORK INC.), 27 December 1996 (27.12.96), figure 19, claims 1,7	1
A	figures 3,8,12, claims 1,12,23,37, abstract	2-10
P,A	-- WO 9923842 A1 (MOTOROLA INC), 14 May 1999 (14.05.99), page 5, line 30 - page 6, line 1, figures 1,4, claim 1, page 9, line 3 - 10 and 13-18; abstract -----	1-10

 Further documents are listed in the continuation of Box C. See patent family annex.

- \* Special categories of cited documents
- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed
- "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- "X" document of particular relevance: the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance: the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
- "&" document member of the same patent family

Date of the actual completion of the international search

27 June 2000

Date of mailing of the international search report

13-07-2000

Name and mailing address of the ISA/  
Swedish Patent Office  
Box 5055, S-102 42 STOCKHOLM  
Facsimile No. + 46 8 666 02 86Authorized officer  
**JAANA RAIPIO/ ipn**  
Telephone No. + 46 8 782 25 00

**INTERNATIONAL SEARCH REPORT**  
Information on patent family members

02/12/99

International application No.	
PCT/FI 00/00118	

Patent document cited in search report	Publication date	Patent family member(s)		Publication date
EP 0750440 A2	27/12/96	CN	1146700 A	02/04/97
		JP	2905132 B	14/06/99
		JP	9069824 A	11/93/97
		US	5838671 A	17/11/98
		JP	2909009 B	23/06/99
		JP	9084105 A	28/03/97
WO 9923842 A1	14/05/99	AU	8685898 A	24/05/99
		FR	2770716 A	07/05/99

## PATENT COOPERATION TREATY

89/913457

PCT

**NOTICE INFORMING THE APPLICANT OF THE COMMUNICATION OF THE INTERNATIONAL APPLICATION TO THE DESIGNATED OFFICES**

(PCT Rule 47.1(c), first sentence)

From the INTERNATIONAL BUREAU

To:

BERGGREN OY AB  
 P.O. Box 16  
 FIN-00101 Helsinki  
 FINLANDE

*Berggren Oy Ab.*

31-08-2000

*tel. (H)*

Date of mailing (day/month/year) 24 August 2000 (24.08.00)			
Applicant's or agent's file reference 49437		<b>IMPORTANT NOTICE</b>	
International application No. PCT/FI00/00118	International filing date (day/month/year) 16 February 2000 (16.02.00)	Priority date (day/month/year) 16 February 1999 (16.02.99)	
Applicant NOKIA NETWORKS OY et al			

1. Notice is hereby given that the International Bureau has communicated, as provided in Article 20, the international application to the following designated Offices on the date indicated above as the date of mailing of this Notice:  
AU,KP,KR,US

In accordance with Rule 47.1(c), third sentence, those Offices will accept the present Notice as conclusive evidence that the communication of the international application has duly taken place on the date of mailing indicated above and no copy of the international application is required to be furnished by the applicant to the designated Office(s).

2. The following designated Offices have waived the requirement for such a communication at this time:  
 AE,AL,AM,AP,AT,AZ,BA,BB,BG,BR,BY,CA,CH,CN,CR,CU,CZ,DE,DK,DM,EA,EE,EP,ES,FI,GB,GD,  
 GE,GH,GM,HR,HU,IL,IN,IS,JP,KE,KG,KZ,LC,LK,LR,LS,LT,LU,LV,MA,MD,MG,MK,MN,MW,MX,  
 NO,NZ,OA,PL,PT,RO,RU,SD,SE,SG,SI,SK,SL,TJ,TM,TR,TT,TZ,UA,UG,UZ,VN,YU,ZA,ZW  
 The communication will be made to those Offices only upon their request. Furthermore, those Offices do not require the applicant to furnish a copy of the international application (Rule 49.1(a-bis)).
3. Enclosed with this Notice is a copy of the international application as published by the International Bureau on 24 August 2000 (24.08.00) under No. WO 00/49824

**REMINDER REGARDING CHAPTER II (Article 31(2)(a) and Rule 54.2)**

If the applicant wishes to postpone entry into the national phase until 30 months (or later in some Offices) from the priority date, a demand for international preliminary examination must be filed with the competent International Preliminary Examining Authority before the expiration of 19 months from the priority date.

It is the applicant's sole responsibility to monitor the 19-month time limit.

Note that only an applicant who is a national or resident of a PCT Contracting State which is bound by Chapter II has the right to file a demand for international preliminary examination.

**REMINDER REGARDING ENTRY INTO THE NATIONAL PHASE (Article 22 or 39(1))**

If the applicant wishes to proceed with the international application in the national phase, he must, within 20 months or 30 months, or later in some Offices, perform the acts referred to therein before each designated or elected Office.

For further important information on the time limits and acts to be performed for entering the national phase, see the Annex to Form PCT/IB/301 (Notification of Receipt of Record Copy) and Volume II of the PCT Applicant's Guide.

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland	Authorized officer  J. Zahra
Facsimile No. (41-22) 740.14.35	Telephone No. (41-22) 338.83.38

Continuation of Form PCT/IB/308

NOTICE INFORMING THE APPLICANT OF THE COMMUNICATION OF  
THE INTERNATIONAL APPLICATION TO THE DESIGNATED OFFICES

Date of mailing (day/month/year) 24 August 2000 (24.08.00)	<b>IMPORTANT NOTICE</b>
Applicant's or agent's file reference 49437	International application No. PCT/FI00/00118

The applicant is hereby notified that, at the time of establishment of this Notice, the time limit under Rule 46.1 for making amendments under Article 19 has not yet expired and the International Bureau had received neither such amendments nor a declaration that the applicant does not wish to make amendments.

The demand must be filed directly with the competent International Preliminary Examining Authority or if two or more Authorities are competent, with the one chosen by the applicant. The first three or two-letter code of that Authority may be indicated by the applicant on the line below:  
IPEA/EP

# PCT

## CHAPTER II

### DEMAND

under Article 31 of the Patent Cooperation Treaty:  
The undersigned requests that the international application specified below be the subject of international preliminary examination according to the Patent Cooperation Treaty and hereby elects all eligible States (except where otherwise indicated).

For International Preliminary Examining Authority use only

Identification of IPEA		Date of receipt of DEMAND
<b>Box No. I IDENTIFICATION OF THE INTERNATIONAL APPLICATION</b>		
International application No. PCT/FI00/00118	International filing date (day/month/year) 16 February 2000 (16.2.00)	Applicant's or agent's file reference 49437/ML/MM (Earliest) Priority date (day/month/year) 16 February 1999 (16.2.99)
Title of invention <b>AN ADMISSION CONTROL METHOD</b>		
<b>Box No. II APPLICANT(S)</b>		
Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country.) NOKIA NETWORKS OY P.O. Box 300 FIN-00045 NOKIA GROUP Finland		Telephone No.:  Facsimile No.:  Teleprinter No.:  
State (that is, country) of nationality: Finland	State (that is, country) of residence: Finland	
Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country.) NAGHIAN, Siamäk Maininkitie 2 A 3 FIN-02320 ESPOO Finland		
State (that is, country) of nationality: Finland	State (that is, country) of residence: Finland	
Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country.)		
State (that is, country) of nationality:	State (that is, country) of residence:	
<input type="checkbox"/> Further applicants are indicated on a continuation sheet.		

**Box No. III AGENT OR COMMON REPRESENTATIVE; OR ADDRESS FOR CORRESPONDENCE**

The following person is  agent  common representative

and  has been appointed earlier and represents the applicant(s) also for international preliminary examination.

is hereby appointed and any earlier appointment of (an) agent(s)/common representative is hereby revoked.

is hereby appointed, specifically for the procedure before the International Preliminary Examining Authority, in addition to the agent(s)/common representative appointed earlier.

Name and address: (*Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country.*)

BERGGREN OY AB  
P.O. Box 16  
FIN-00101 HELSINKI  
Finland

Telephone No.:

+358-9-693701

Facsimile No.:

+358-9-6933944

Teleprinter No.:

Address for correspondence: Mark this check-box where no agent or common representative is/has been appointed and the space above is used instead to indicate a special address to which correspondence should be sent.

**Box No. IV BASIS FOR INTERNATIONAL PRELIMINARY EXAMINATION****Statement concerning amendments:**\*

1. The applicant wishes the international preliminary examination to start on the basis of:

the international application as originally filed  
 the description  as originally filed  
 as amended under Article 34  
 the claims  as originally filed  
 as amended under Article 19 (together with any accompanying statement)  
 as amended under Article 34  
 the drawings  as originally filed  
 as amended under Article 34

2.  The applicant wishes any amendment to the claims under Article 19 to be considered as reversed.

3.  The applicant wishes the start of the international preliminary examination to be postponed until the expiration of 20 months from the priority date unless the International Preliminary Examining Authority receives a copy of any amendments made under Article 19 or a notice from the applicant that he does not wish to make such amendments (Rule 69.1(d)). (*This check-box may be marked only where the time limit under Article 19 has not yet expired.*)

- \* Where no check-box is marked, international preliminary examination will start on the basis of the international application as originally filed or, where a copy of amendments to the claims under Article 19 and/or amendments of the international application under Article 34 are received by the International Preliminary Examining Authority before it has begun to draw up a written opinion or the international preliminary examination report, as so amended.

**Language for the purposes of international preliminary examination:** English

which is the language in which the international application was filed.  
 which is the language of a translation furnished for the purposes of international search.  
 which is the language of publication of the international application.  
 which is the language of the translation (to be) furnished for the purposes of international preliminary examination.

**Box No. V ELECTION OF STATES**

The applicant hereby elects all eligible States (*that is, all States which have been designated and which are bound by Chapter II of the PCT*)

excluding the following States which the applicant wishes not to elect:

**Box No. VI CHECK LIST**

The demand is accompanied by the following elements, in the language referred to in Box No. IV, for the purposes of international preliminary examination:

- |  |          |
|--|----------|
| 1. translation of international application                              | : sheets |
| 2. amendments under Article 34   | : sheets |
| 3. copy (or, where required, translation) of amendments under Article 19 | : sheets |
| 4. copy (or, where required, translation) of statement under Article 19  | : sheets |
| 5. letter  | : sheets |
| 6. other (specify)   | : sheets |

For International Preliminary Examining Authority use only

received      not received

<input type="checkbox"/>	<input type="checkbox"/>

The demand is also accompanied by the item(s) marked below:

- |  |   |
|--|---|
| 1. <input checked="" type="checkbox"/> fee calculation sheet                             | 4. <input type="checkbox"/> statement explaining lack of signature                                  |
| 2. <input type="checkbox"/> separate signed power of attorney                            | 5. <input type="checkbox"/> nucleotide and or amino acid sequence listing in computer readable form |
| 3. <input type="checkbox"/> copy of general power of attorney; reference number, if any: | 6. <input type="checkbox"/> other (specify):  |

**Box No. VII SIGNATURE OF APPLICANT, AGENT OR COMMON REPRESENTATIVE**

Next to each signature, indicate the name of the person signing and the capacity in which the person signs (if such capacity is not obvious from reading the demand).

BERGGREN OY AB

Matti Brax  
Patent Agent

14 September 2000

**For International Preliminary Examining Authority use only**

1. Date of actual receipt of DEMAND:

2. Adjusted date of receipt of demand due to CORRECTIONS under Rule 60.1(b):

3.  The date of receipt of the demand is AFTER the expiration of 19 months from the priority date and item 4 or 5, below, does not apply.  The applicant has been informed accordingly.
4.  The date of receipt of the demand is WITHIN the period of 19 months from the priority date as extended by virtue of Rule 80.5.
5.  Although the date of receipt of the demand is after the expiration of 19 months from the priority date, the delay in arrival is EXCUSED pursuant to Rule 82.

**For International Bureau use only**

Demand received from IPEA on:

## PCT

## FEE CALCULATION SHEET

## Annex to the Demand for international preliminary examination

International application No.	PCT/FI00/00118	For International Preliminary Examining Authority use only
Applicant's or agent's file reference	49437/ML/MM	Date stamp of the IPEA
Applicant NOKIA NETWORKS OY		
<b>Calculation of prescribed fees</b>		
1. Preliminary examination fee .....	EUR 1533	P
2. Handling fee ( <i>Applicants from certain States are entitled to a reduction of 75% of the handling fee. Where the applicant is (or all applicants are) so entitled, the amount to be entered at H is 25% of the handling fee.</i> ) .....	EUR 147	H
3. Total of prescribed fees Add the amounts entered at P and H and enter total in the TOTAL box .....	EUR 1680	
	TOTAL	
<b>Mode of Payment</b>		
<input type="checkbox"/> authorization to charge deposit account with the IPEA (see below)	<input type="checkbox"/> cash	
<input type="checkbox"/> cheque	<input type="checkbox"/> revenue stamps	
<input type="checkbox"/> postal money order	<input type="checkbox"/> coupons	
<input type="checkbox"/> bank draft	<input checked="" type="checkbox"/> other (specify): Bank transfer to account 157230-340380	

**Deposit Account Authorization** (*this mode of payment may not be available at all IPEAs*)

The IPEA/ EP  is hereby authorized to charge the total fees indicated above to my deposit account.

(*this check-box may be marked only if the conditions for deposit accounts of the IPEA so permit*) is hereby authorized to charge any deficiency or credit any overpayment in the total fees indicated above to my deposit account.

Deposit Account Number

Date (day/month/year)

Signature

## PATENT COOPERATION TREATY

09/913457

From the:  
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

To:

BERGGREN OY AB  
P.O. Box 16  
FIN-00101 Helsinki  
FINLAND

Berggren Oy PCT

21-11-2000

## WRITTEN OPINION

(PCT Rule 66)

Date of mailing  
(day/month/year)

17.11.2000

17/2/01

Applicant's or agent's file reference <b>49437/ML/MM</b>	<b>REPLY DUE</b>	<b>within 3 month(s)</b> from the above date of mailing
International application No. <b>PCT/FI00/00118</b>	International filing date (day/month/year) <b>16/02/2000</b>	Priority date (day/month/year) <b>16/02/1999</b>
International Patent Classification (IPC) or both national classification and IPC <b>H04Q7/38</b>		
Applicant <b>NOKIA NETWORKS OY et al.</b>		

1. This written opinion is the first drawn up by this International Preliminary Examining Authority.

2. This opinion contains indications relating to the following items:

- I  Basis of the opinion
- II  Priority
- III  Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV  Lack of unity of invention
- V  Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI  Certain document cited
- VII  Certain defects in the international application
- VIII  Certain observations on the international application

3. The applicant is hereby invited to reply to this opinion.

**When?** See the time limit indicated above. The applicant may, before the expiration of that time limit, request this Authority to grant an extension, see Rule 66.2(d).

**How?** By submitting a written reply, accompanied, where appropriate, by amendments, according to Rule 66.3. For the form and the language of the amendments, see Rules 66.8 and 66.9.

**Also:** For an additional opportunity to submit amendments, see Rule 66.4. For the examiner's obligation to consider amendments and/or arguments, see Rule 66.4 bis. For an informal communication with the examiner, see Rule 66.6.

If no reply is filed, the international preliminary examination report will be established on the basis of this opinion.

4. The final date by which the international preliminary examination report must be established according to Rule 69.2 is: **16/06/2001**.

Name and mailing address of the international preliminary examining authority:



European Patent Office  
D-80298 Munich  
Tel. +49 89 2399 - 0 Tx: 523656 epmu d  
Fax: +49 89 2399 - 4465

Authorized officer / Examiner

**Hodgins, W**

Formalities officer (incl. extension of time limits)  
**Finnie, A**  
Telephone No. +49 89 2399 8251



**I. Basis of the opinion**

1. This opinion has been drawn on the basis of (*substitute sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this opinion as "originally filed".*).

**Description, pages:**

1-18                  as published

**Claims, No.:**

1-10                  as published

**Drawings, sheets:**

1/8-8/8              as published

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- the language of publication of the international application (under Rule 48.3(b)).
- the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- contained in the international application in written form.
- filed together with the international application in computer readable form.
- furnished subsequently to this Authority in written form.
- furnished subsequently to this Authority in computer readable form.
- The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- the description,        pages:
- the claims,           Nos.:

- the drawings, sheets:
5.  This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)): *(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)*
6. Additional observations, if necessary:

**VII. Certain defects in the international application**

The following defects in the form or contents of the international application have been noted:  
see separate sheet

**VIII. Certain observations on the international application**

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:  
see separate sheet

The following documents are cited:

- D1: EP-A2-0750440  
D2: WO-A1-9923842

**Concerning Point VII**

- 1) The independent claims should be put in the two part form recommended by Rule 6.3(b) PCT with a pre-characterising part reflecting the teachings of the closest prior art (eg D1).

If, however, the applicant is of the opinion that the two-part form would be inappropriate, then reasons therefor should be provided in the letter of reply. In addition, the applicant should ensure that it is clear from the description which features of the subject-matter of the independent claims are known from the prior art (cf. the PCT Guidelines PCT/GL/3 III 2.3a).

- 2) In order to meet the requirements of Rule 6.2(b) PCT reference signs in parenthesis should be added to the (method) claims in as far as they refer to apparatus features. This applies both to the pre-amble and to the characterising part.
- 3) In order to meet the requirements of Rule 5.1(a)(ii) PCT, at least the document D1 should be cited in the description and briefly discussed.

Alternatively, the applicant could provide the office with the relevant pages of the most relevant of the documents mentioned on page 2 of the description.

- 4) If necessary, the description should be brought into conformance with any newly filed claims (Rule 5.1(a)(iii) PCT).
- 5) Article 34(2)(b) PCT must be observed when amending.

**Concerning Point VIII**

- 1) Claim 1 relates to a method for admission control in a cellular telecommunication system.
  - The claim is incomplete, and thus unclear due to the lack of essential features (Article 6 PCT; cf also PCT Guidelines III 4.4). The reason for this is the second "if" clause, which merely claims that "if said result load estimate is larger than said first predefined limit, releasing of transmission resources is attempted".

On its own, this neither has anything to do with nor does not lead to admission of a bearer request. Accordingly, this clause doesn't currently lead to the invention being carried out.

The claim should thus be completed with features that claim that if sufficient resources can be released, the bearer request is admitted.

- 2) Mentions of "spirit" or similar should be deleted from the description (cf. PCT Guidelines PCT/GL/3 III 4.3a).
- 3) For the sake of completeness, the following is noted with respect to D1 and D2:

D1 (see in particular flow charts 3, 8 and 12 and related parts of description) seems to teach an admission control method where, when a connection request is made, free resources are checked. If sufficient resources exist (eg spread codes and baseband units are available; number of connections is below some threshold; interference below a threshold) a call is admitted.

D1 fails to teach (as claimed) either the calculation of a "result load estimate" or an attempt to release transmission resources.

D2 is not pre-published. Although it seems closer in concept to the current invention than D1, in that it attempts to take some corrective action if not enough bandwidth is available for a new call, this takes the form of seeing if any bandwidth is available, rather than attempting to release resources.

## PCT

**INTERNATIONAL PRELIMINARY EXAMINATION REPORT**  
**(PCT Article 36 and Rule 70)**

Applicant's or agent's file reference 49437/ML/MM	<b>FOR FURTHER ACTION</b>		See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)
International application No. PCT/FI00/00118	International filing date (day/month/year) 16/02/2000	Priority date (day/month/year) 16/02/1999	
International Patent Classification (IPC) or national classification and IPC H04Q7/38			
Applicant NOKIA NETWORKS OY et al.			

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 5 sheets, including this cover sheet.

This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 3 sheets.

3. This report contains indications relating to the following items:

- I     Basis of the report
- II     Priority
- III     Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV     Lack of unity of invention
- V     Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI     Certain documents cited
- VII     Certain defects in the international application
- VIII     Certain observations on the international application

Date of submission of the demand 14/09/2000	Date of completion of this report 12.03.2001
Name and mailing address of the international preliminary examining authority:   European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized officer  Hodgins, W  Telephone No. +49 89 2399 8987



**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. PCT/FI00/00118

**I. Basis of the report**

1. This report has been drawn on the basis of (*substitute sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to the report since they do not contain amendments (Rules 70.16 and 70.17).*):

**Description, pages:**

1-17	as published	
18	with telefax of	19/02/2001

**Claims, No.:**

1-10	with telefax of	19/02/2001
------	-----------------	------------

**Drawings, sheets:**

1/8-8/8	as published
---------	--------------

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- the language of publication of the international application (under Rule 48.3(b)).
- the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- contained in the international application in written form.
- filed together with the international application in computer readable form.
- furnished subsequently to this Authority in written form.
- furnished subsequently to this Authority in computer readable form.
- The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. PCT/FI00/00118

- the description,      pages:  
 the claims,      Nos.:  
 the drawings,      sheets:
5.  This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):  
*(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)*
6. Additional observations, if necessary:

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Statement

Novelty (N)	Yes:	Claims 1-10
	No:	Claims
Inventive step (IS)	Yes:	Claims 1-10
	No:	Claims
Industrial applicability (IA)	Yes:	Claims 1-10
	No:	Claims

2. Citations and explanations  
see separate sheet

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/FI00/00118

**Concerning Point V**

- 1) The following documents are cited:

D1: EP-A2-0750440  
D2: WO-A1-9923842

- 2) Independent claim 1 relates to a method for admission control in a cellular telecommunications system. This is, of course, generally known in the art, for example from D1, the only pre-published prior art in the International Search Report, or from the journal articles mentioned and discussed on page 2 of the description.

Known admission control methods such as D1 (see in particular flow charts 3, 8 and 12 and related parts of description) teach admission control where, when a connection request is made, free resources are checked. If sufficient resources exist (eg spread codes and baseband units are available; number of connections is below some threshold; interference below a threshold) a call is admitted.

This is inefficient when the bearers have widely varying properties (eg in UMTS), where some bearer requests may be admissible, but others may not be. The art mentioned in the description suffers the same limitations. This is overcome by the current application (cf features of claim 1) by calculation of a "result load estimate" to see if a new request can be serviced, and attempting to release transmission resources if at a first attempt a new request may not be serviced (which may allow admission of requests that prior art methods wouldn't).

This is neither known nor derivable from D1 (or the other pre-published art). Claim 1 (and thus by extension dependent claims 2 - 10) thus meets the requirements of Articles 33(1) - (4) PCT with regard to novelty, inventive step and industrial applicability.

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/FI00/00118

- 3) Merely for completeness, the following is noted with respect to D2. D2 is not pre-published. Although it seems closer in concept to the current invention than D1, in that it attempts to take some corrective action if not enough bandwidth is available for a new call, this takes the form of seeing if any bandwidth is available, rather than attempting to release resources. Claim 1 is thus clearly novel over D2.

information from the LC entity, which sends 410 information about the current load situation to the AC entity. The AC entity then examines 420 the information, and if the load is found to be over the first predefined limit, the AC entity negotiates 430 with the bearer management entity in order to change the properties of at least one bearer in order to bring the load under the first predefined limit.

The invention is not limited to be used in any specific area of the cellular network. The admission control method according to the invention can be used to control admission for example in a single cell, in a sector of a cell, or in a plurality of cells such as a routing area or a whole radio access network.

10 The control region may further divided into transmission or interreference power or SIR subregions, each having a fixed and an adaptive part of radio resources of the control region to be allocated.

15 The name of a given functional entity, such as the radio network controller, is often different in the context of different cellular telecommunication systems. For example, in the GSM system the functional entity corresponding to a radio network controller (RNC) is the base station controller (BSC). Therefore, the term radio network controller in the claims is intended to cover all corresponding functional entities regardless of the term used for the entity in the particular cellular telecommunication system. Further, the various command and message names such as  
20 the LOAD\_INFO message name are intended to be examples only, and the invention is not limited to using the command and message names recited in this specification. Further, the term modified in the attached claims is intended to cover any changes effected to the parameters of at least one bearer, whether renegotiated or changed without renegotiation.

25 The invention can be used in any cellular telecommunication system, which is at least in part based on spread spectrum technology.

30 In view of the foregoing description it will be evident to a person skilled in the art that various modifications may be made within the scope of the invention. While a preferred embodiment of the invention has been described in detail, it should be apparent that many modifications and variations thereto are possible within the scope of the appended claims.

**Claims**

1. A method for admission control in a cellular telecommunication system, the method comprising steps in which

- a bearer request is received (105), and
- 5 - current load is checked (110),

characterized in that the method further comprises steps, in which

- a result load estimate is calculated (115) based at least on the current load and said bearer request, and

- if said result load estimate is lower than a first predefined limit

10       said bearer request is admitted (125),

transmission resources are allocated (130) according to said request, and  
the resulting load is checked (135); and

- if said result load estimate is larger than said first predefined limit, releasing of transmission resources is attempted (122) in order to bring a load estimate under

15       said first predetermined limit for allowing admittance of said requested bearer.

2. A method according to claim 1, characterized in that

as a response to said checking of the resulting load, if the resulting load is larger than said first predetermined limit,

the parameters of at least one bearer are modified (145) in order to bring the resulting load under said first predetermined limit.

20       3. A method according to claim 1, characterized in that

after said step of attempting,

- the current load is checked (165),

25       - a result load estimate is calculated (167) based at least on the current load and the bearer request, and

- if said result load estimate is lower than a first predefined limit

the bearer request is admitted (180),

transmission resources are allocated (130) according to said request, and  
the resulting load is checked (135).

30       4. A method according to claim 3, characterized in that

as a response to said checking of the resulting load, if the resulting load is larger than said first predetermined limit,

the parameters of at least one bearer are modified (145) in order to bring the resulting load under said first predetermined limit.

5. A method according to claim 1, characterized in that if said result load estimate is over said first predefined limit,
  - the bearer request is modified (160) for lowering the amount of resources required by the request,
- 5 - current load is checked (165),
  - a result load estimate is calculated (167) based at least on the current load and said modified bearer request, and
  - if said result load estimate is lower than a first predefined limit said modified bearer request is admitted (180),
- 10 transmission resources are allocated (130) according to said request, and the resulting load is checked (135).
6. A method according to claim 5, characterized in that as a response to said checking of the resulting load, if the resulting load is larger than said first predetermined limit,
  - 15 the parameters of at least one bearer are modified (145) in order to bring the resulting load under said first predetermined limit.
7. A method according to claim 1, characterized in that said step of attempting comprises the step of adjusting (155) handover control parameters of the cellular network.
- 20 8. A method according to claim 1, characterized in that said step of attempting comprises the step of adjusting (150) power control parameters of the cellular network.
9. A method according to claim 1, characterized in that said step of attempting comprises the step of adjusting (151) load control parameters of the cellular network.
- 25 10. A method according to claim 1, characterized in that said step of attempting comprises the step adjusting (152) of soft handover and soft capacity margins of the cellular network.

09/913457

1/4

49437

**PCT REQUEST**

Original (for SUBMISSION) - printed on 16.02.2000 03:06:36 PM

0	For receiving Office use only International Application No.	
0-1		
0-2	International Filing Date	
0-3	Name of receiving Office and "PCT International Application"	
0-4	Form - PCT/RO/101 PCT Request Prepared using	<b>PCT-EASY Version 2.90 (updated 15.12.1999)</b>
0-5	Petition The undersigned requests that the present international application be processed according to the Patent Cooperation Treaty	
0-6	Receiving Office (specified by the applicant)	<b>National Board of Patents and Registration (Finland) (RO/FI)</b>
0-7	Applicant's or agent's file reference	<b>49437</b>
I	Title of invention	<b>AN ADMISSION CONTROL METHOD</b>
II	Applicant II-1 This person is: II-2 Applicant for II-4 Name II-5 Address:	applicant only all designated States except US <b>NOKIA NETWORKS OY</b> P.O. Box 300 <b>FIN-00045 Nokia Group</b> <b>Finland</b>
II-6	State of nationality	<b>FI</b>
II-7	State of residence	<b>FI</b>
II-8	Telephone No.	<b>+358-9-51121</b>
II-9	Facsimile No.	<b>+358-9-51168080</b>
III-1	Applicant and/or inventor III-1-1 This person is: III-1-2 Applicant for III-1-4 Name (LAST, First) III-1-5 Address:	applicant and inventor US only <b>NAGHIAN, Siamäk</b> <b>Maininkitie 2 A 3</b> <b>FIN-02320 Espoo</b> <b>Finland</b>
III-1-6	State of nationality	<b>FI</b>
III-1-7	State of residence	<b>FI</b>

## PCT REQUEST

Original (for SUBMISSION) - printed on 16.02.2000 03:06:36 PM

IV-1	<b>Agent or common representative; or address for correspondence</b> The person identified below is hereby/has been appointed to act on behalf of the applicant(s) before the competent International Authorities as:  Name Address:	agent  BERGGREN OY AB P.O. Box 16 FIN-00101 Helsinki Finland +358-9-693701 +358-9-6933944 email.box@berggren.elisa.fi
V	<b>Designation of States</b>	
V-1	Regional Patent (other kinds of protection or treatment, if any, are specified between parentheses after the designation(s) concerned)	AP: GH GM KE LS MW SD SL SZ TZ UG ZW and any other State which is a Contracting State of the Harare Protocol and of the PCT  EA: AM AZ BY KG KZ MD RU TJ TM and any other State which is a Contracting State of the Eurasian Patent Convention and of the PCT  EP: AT BE CH&LI CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE and any other State which is a Contracting State of the European Patent Convention and of the PCT  OA: BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG and any other State which is a member State of OAPI and a Contracting State of the PCT
V-2	National Patent (other kinds of protection or treatment, if any, are specified between parentheses after the designation(s) concerned)	AE AL AM AT AU AZ BA BB BG BR BY CA CH&LI CN CR CU CZ DE DK DM EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW

## PCT REQUEST

Original (for SUBMISSION) - printed on 16.02.2000 03:06:36 PM

V-5	<b>Precautionary Designation Statement</b> In addition to the designations made under items V-1, V-2 and V-3, the applicant also makes under Rule 4.9(b) all designations which would be permitted under the PCT except any designation(s) of the State(s) indicated under item V-6 below. The applicant declares that those additional designations are subject to confirmation and that any designation which is not confirmed before the expiration of 15 months from the priority date is to be regarded as withdrawn by the applicant at the expiration of that time limit.	
V-6	<b>Exclusion(s) from precautionary designations</b>	<b>NONE</b>
VI-1	<b>Priority claim of earlier national application</b> Filing date	<b>16 February 1999 (16.02.1999)</b>
VI-1-1	Number	<b>990312</b>
VI-1-2	Country	<b>FI</b>
VI-2	<b>Priority document request</b> The receiving Office is requested to prepare and transmit to the International Bureau a certified copy of the earlier application(s) identified above as item(s):	<b>VI-1</b>
VII-1	<b>International Searching Authority Chosen</b>	<b>Swedish Patent Office (ISA/SE)</b>
VIII	<b>Check list</b>	number of sheets
VIII-1	Request	<b>4</b>
VIII-2	Description	<b>18</b>
VIII-3	Claims	<b>2</b>
VIII-4	Abstract	<b>1</b>
VIII-5	Drawings	<b>8</b>
VIII-7	<b>TOTAL</b>	<b>33</b>
VIII-8	<b>Accompanying Items</b>	paper document(s) attached
VIII-9	Fee calculation sheet	✓
VIII-10	Separate signed power of attorney	✓
VIII-16	Copy of general power of attorney	✓
VIII-17	PCT-EASY diskette	-
VIII-17	Other (specified):	<b>Copy of Official Action in FI 990312</b>
VIII-18	Figure of the drawings which should accompany the abstract	<b>2</b>
VIII-19	Language of filing of the international application	<b>English</b>

**PCT REQUEST**

Original (for SUBMISSION) - printed on 16.02.2000 03:06:36 PM

IX-1	Signature of applicant or agent	
IX-1-1	Name	BERGGREN OY AB
IX-1-2	Name of signatory	Markus Levlin
IX-1-3	Capacity	Patent Agent

**FOR RECEIVING OFFICE USE ONLY**

10-1	Date of actual receipt of the purported international application	
10-2	Drawings:	
10-2-1	Received	
10-2-2	Not received	
10-3	Corrected date of actual receipt due to later but timely received papers or drawings completing the purported international application	
10-4	Date of timely receipt of the required corrections under PCT Article 11(2)	
10-5	International Searching Authority	ISA/SE
10-6	Transmittal of search copy delayed until search fee is paid	

**FOR INTERNATIONAL BUREAU USE ONLY**

11-1	Date of receipt of the record copy by the International Bureau	
------	--	--

## PCT (ANNEX - FEE CALCULATION SHEET)

Original (for SUBMISSION) - printed on 16.02.2000 03:06:36 PM

49437

(This sheet is not part of and does not count as a sheet of the international application)

0	For receiving Office use only International Application No.		
0-1			
0-2	Date stamp of the receiving Office		
0-4	Form - PCT/RO/101 (Annex) PCT Fee Calculation Sheet Prepared using	<b>PCT-EASY Version 2.90 (updated 15.12.1999)</b>	
0-4-1			
0-9	Applicant's or agent's file reference	<b>49437</b>	
2	Applicant	<b>NOKIA NETWORKS OY, et al.</b>	
12	Calculation of prescribed fees	fee amount/multiplier	total amounts (FIM)
12-1	Transmittal fee	T	⇒ 800
12-2	Search fee	S	⇒ 5 618
12-3	International fee Basic fee (first 30 sheets)	b1	2 431,8
12-4	Remaining sheets	3	
12-5	Additional amount	(X) 53,51	
12-6	Total additional amount	b2	160,53
12-7	b1 + b2 =	B	2 592,33
12-8	Designation fees Number of designations contained in international application	83	
12-9	Number of designation fees payable (maximum 8)	8	
12-10	Amount of designation fee	(X) 523,22	
12-11	Total designation fees	D	4 185,76
12-12	PCT-EASY fee reduction	R	-749,16
12-13	Total International fee (B+D-R)	I	⇒ 6 028,93
12-14	Fee for priority document Number of priority documents requested	1	
12-15	Fee per document	(X) 422	
12-16	Total priority document fee	P	⇒ 422
12-17	<b>TOTAL FEES PAYABLE (T+S+I+P)</b>		12 868,93
12-19	Mode of payment	<b>cheque</b>	

## VALIDATION LOG AND REMARKS

13-2-6	Validation messages Contents	Green? Reference number for attached copy of general power of attorney not indicated.
--------	---------------------------------	---

Original (for SUBMISSION) - printed on 16.02.2000 03:06:36 PM

### PCT-EASY INFORMATION SHEET

(For applicant use only, DO NOT submit this sheet with the international application)

#### VALIDATION LOG

Green?	Contents
	Reference number for attached copy of general power of attorney not indicated.

Before submitting the International Application, please carefully verify that:

- the information contained on printed Request form is correct;
- Box IX of the Request form has been signed;
- all elements of the international application as indicated in Box VIII of the Request form have been attached; and,
- the diskette containing the PCT-EASY zip file of the International Application has been enclosed and has been clearly labeled "PCT-EASY", with the applicant's or agent's file reference, and the first applicant's name.

#### ATTENTION

DO NOT modify any indications on the Request form printout. The attached PCT-EASY application has been locked. If an error or an omission is discovered at this time, you must copy the submitted application as a template and make the change or correction in a new application (using the submitted application as a template). You may create such a template by copying the submitted application from the "Stored Forms" folder to the "New PCT Forms" folder. Open the new (.OWO) file created in the "New PCT Forms" folder, correct the errors and proceed with the submission process again.